

Montana Board of Oil and Gas Conservation

Environmental Assessment

Operator: Oasis Petroleum North America LLC
Well Name/Number: BrianM 2958 43-10H
Location: SW SE Section 10 T29N R58E
County: Roosevelt, MT; Field (or Wildcat) Wildcat

Air Quality

(possible concerns)

Long drilling time: No, 25-35 days drilling time.

Unusually deep drilling (high horsepower rig): Triple derrick drilling rig to drill a single lateral horizontal Bakken Formation test, 20,355' MD/10,585' TVD.

Possible H2S gas production: Yes, slight H2S possible from Mississippian Formations.

In/near Class I air quality area: No Class I air quality area nearby.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☒ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Plan is to drill a single lateral horizontal Bakken Formation test, 20,355' MD/10,585' TVD. If there are existing pipelines for natural gas in the area then associated gas must be tied into gathering system or if no gathering system nearby associated gas can be flared under Board Rule 36.22.1220.

Water Quality

(possible concerns)

Salt/oil based mud: Yes to oil based invert drilling fluids for intermediate casing hole. Horizontal hole will be drilled with saltwater. Surface casing hole will be drilled with freshwater and freshwater mud system (rule 36.22.1001).

High water table: No high water table anticipated.

Surface drainage leads to live water: No, closest drainages are an unnamed ephemeral tributary drainage to Snake Creek, about 3/8 of a mile to the south and about 5/8 of a mile to the east an ephemeral drainage Sand Creek from this location. A small stock pond exists about 1.125 miles to the northeast from this location.

Water well contamination: No, closest water wells are about 1/4 of a mile to the southeast, about 7/8 of a mile to the northeast and about 1 mile to the southwest from this location. Depth of these domestic and stock water wells range from 90' to 238'. This proposed oil well will be drilled with freshwater and freshwater mud to 2,271' and steel surface casing will be run and cemented to surface to protect groundwater (rule 36.22.1001).

Porous/permeable soils: No, sandy silty clay soils.

Class I stream drainage: No, Class I stream drainages.

Mitigation:

☐ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☒ Closed mud system

☒ Off-site disposal of solids/liquids (in approved facility)

☒ Other: Will utilize a lined cuttings pit for cuttings disposal. Liner thickness will be a 12 mil liner.

Comments: 2,271' plus feet of 13.5" surface casing hole will be drilled with freshwater, 9 5/8" steel casing will be run to 2,271' and cemented back to surface, to protect freshwater zones in adjacent water wells (rule 36.22.1001). Also, covering the Fox Hills aquifer. Adequate surface casing and operational BOP equipment will prevent problems. (BOP's 5,000 psig annular, pipe and blind rams) rule 36.22.1014.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No stream crossings anticipated.

High erosion potential: Yes possible high erosion potential on steep cut and fill slopes. Location will require a moderate cut of up to 42.6' and moderate fill of up to 38.2', required.

Loss of soil productivity: No, location to be restored after drilling, if nonproductive. If productive unused portion of this drillsite will be reclaimed.

Unusually large wellsite: Yes, a large well site 430' X 350', designed for a single well drilling location. Brianm 2958 43-10H.

Damage to improvements: Slight surface use appears to be grazing land.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other: _____

Comments: Access will be over an existing county highway, #327 and existing lease road. New access road will be built into this location, about 1175' into this location from the existing lease road. Oil based invert drilling fluids will be recycled. Completion fluids will hauled to a commercial Class II disposal. Cuttings and solids will be buried/solidified on site in the lined cuttings pit. The pit will be allowed to dry and the pit backfilled. No concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Nearest residences are about 3/8 of a mile to the southwest, about 1 mile to the northeast and about 1.125 miles to the northwest from this location. The Town of Bainville, MT is about 9.5 miles to the southwest from this location.

Possibility of H2S: Yes, slight chance from Mississippian Formations.

Size of rig/length of drilling time: Triple drilling rig 25 to 35 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H2S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☒ Other: Standard for the area H2S safety equipment and training for rig

crews.

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems. (BOP's 5,000 psig annular, pipe and blind rams) rule 36.22.1014.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Species identified as threatened or endangered are the Pallid Sturgeon, Interior Least Tern, Whooping Crane and Piping Plover. Candidate species is the Sprague's Pipit. NH tracker website indicates one (1) species of concern: the Whooping Crane.

Mitigation:

☐ Avoidance (topographic tolerance/exception)

☐ Other agency review (DFWP, federal agencies, DSL)

☐ Screening/fencing of pits, drillsite

☐ Other: _____

Comments: Private surface grazing land. There may be species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites: None identified.

Mitigation

☐ avoidance (topographic tolerance, location exception)

☐ other agency review (SHPO, DSL, federal agencies)

☐ Other: _____

Comments: Private surface grazing land. There may be possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)

☐ Substantial effect on tax base

☐ Create demand for new governmental services

☐ Population increase or relocation

Comments: Wildcat well. No concerns

Remarks or Special Concerns for this site

An exploratory single lateral horizontal Bakken Formation test, 20,355'MD/10,585'TVD.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected, some short term impacts will occur, but can be mitigated.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki
(title:) Chief Field Inspector
Date: April 20, 2013

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Roosevelt County water wells
(subject discussed)
April 20, 2013
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA
COUNTIES, Roosevelt County, Montana
(subject discussed)
April 20, 2013

Montana Natural Heritage Program Website
(Name and Agency)
Heritage State Rank= S1, S2, S3, Location T29N R58E
(subject discussed)

April 20, 2013
(date)

Montana Cadastral Website
(Name and Agency)
Surface Ownership and surface use Section 10 T29N R58E
(subject discussed)
April 20, 2013
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection: _____